

REMARKS

Claims 1, 5, 8 and 34 have been amended.

Claims 1 - 34 are present in the subject application.

In the Office Action dated September 21, 2000, the Examiner has allowed claims 2, 3 and 9 - 33, has rejected claims 1 and 4 - 8 under 35 U.S.C. §102(b), and has rejected claim 34 under 35 U.S.C. §112, second paragraph and 35 U.S.C. §103(a). Applicants gratefully acknowledge the Examiner's indication of allowed claims, and respectfully request reconsideration of the remaining claims based on the following remarks.

Initially, the Examiner has rejected claim 34 under 35 U.S.C. §112, second paragraph as being indefinite. The Examiner takes the position that the term "said housing" lacks antecedent basis. Accordingly, claim 34 has been amended in accordance with the Examiner's comments and is considered to comply with 35 U.S.C. §112, second paragraph.

The Examiner has rejected claims 1 and 4 - 8 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,605,840 (Koopman). Briefly, the Koopman patent discloses a food holding cabinet having a plurality of drawer-containing modules arranged in side-by-side relation. The modules are capable of being independently heated and humidified with each module including enclosing walls and an open front adopted to receive a drawer. The module walls define an enclosing cavity that is heated by conduction of heat through those walls. The module bottom wall is preferably provided with one or more flat electric heating elements mounted in direct contact with the undersurface of the bottom wall. A thermostat is further mounted on the undersurface of the module bottom wall to sense cavity temperature. The thermostat is connected to a thermostatic controller that energizes and de-energizes the heating elements in accordance with a desired temperature.

In contrast, the present invention is directed towards a temperature controlled system including a cabinet or system housing having at least one drawer for containing intravenous solution bags or other medical items. Each drawer is individually controlled and generally includes a plurality of sub-compartments, each sub-compartment accommodating an intravenous solution bag or other medical item. The drawers, are each pivotable relative to the system housing to permit access to the sub-compartments. A heating element is typically disposed beneath each drawer bottom wall to apply heat to walls of corresponding sub-compartments and evenly distribute heat to intravenous solution bags contained within those sub-compartments. Each drawer is associated with a controller that controls the heating element to apply heat to the corresponding drawer sub-compartments in accordance with a comparison between desired and measured temperatures associated with that drawer.

The Examiner takes the position that the Koopman patent discloses a plurality of drawers independently heated over a portion of one wall by sensor-based control and heat inherently transmitted to adjacent drawer walls.

This rejection is respectfully traversed since the Koopman patent does not disclose, teach or suggest the features of a heating chamber for receiving at least one medical item as recited in independent claims 1, 5 and 8 and a controller to facilitate entry of a desired temperature for each heating chamber and to control the heater of each heating chamber as further recited in independent claim 8. However, in order to expedite prosecution of the subject application and to further clarify features of the present invention, independent claim 1 has been amended to recite the features of a medical item support structure to support at least one medical item within the heating chamber and being manipulable relative to the system housing to facilitate entry and removal of at least one medical item within the system. Independent claim 1 further recites the feature of a heater applying

heat to a first wall of a receptacle of the manipulable support structure. The Koopman patent does not disclose, teach or suggest these features. Rather, the Koopman patent discloses a food holding cabinet including drawer-containing modules for heating various food products (e.g., See Abstract; Column 1, line 45; and Column 4, line 12). A drawer is slidably received in each module while one or more heating elements are mounted in direct contact with that module bottom wall (e.g., See Column 1, line 58 and Column 3, line 19). Thus, the heating elements of the Koopman patent are applying heat to stationary module walls, as opposed to a manipulable support structure as recited in the claim. Further, the Koopman patent does not disclose, teach or suggest heating of medical items or, for that matter, a medical item storage structure as recited in the claim. Since the Koopman patent does not disclose, teach or suggest the above-discussed features recited in independent claim 1, this claim is considered to be in condition for allowance.

The rejection with respect to independent claims 5 and 8 is respectfully traversed for the reasons discussed above. However, in order to expedite prosecution of the subject application and to further clarify features of the present invention, independent claims 5 and 8 have been amended to recite the feature of a medical item support structure within each heating chamber to support at least one medical item within that heating chamber. Independent claim 8 further recites the feature of a controller to facilitate entry of a desired temperature for each heating chamber and to control the heater of each heating chamber to heat at least one medical item contained within that chamber to the desired temperature in response to a measured temperature of that chamber. As discussed above for claim 1, the Koopman patent does not disclose, teach or suggest heating of medical items or, for that matter, a medical item support structure as recited in independent claims 5 and 8. Further, the Koopman patent does not disclose, teach or suggest the feature of a common controller facilitating entry of desired temperatures and controlling heating chambers as recited in independent claim 8.

Rather, the Koopman patent discloses a system having individual controls for each module (e.g., See Column 3, line 39). Since the Koopman patent does not disclose, teach or suggest the above-discussed features recited in independent claims 5 and 8, these claims are considered to be in condition for allowance.

Claims 4, 6 and 7 each depend from either independent claim 1 or 5, and have all the limitations of their parent claims. Claims 4, 6 and 7 are considered to be in condition for allowance for substantially the same reasons discussed above in relation to their parent claims and for further limitations recited in the dependent claims. For example, claim 4 recites the feature of the heater configured to cover a portion and less than the entirety of a receptacle first wall. As discussed above for independent claim 1, the heating elements of the Koopman patent apply heat to stationary module walls, as opposed to a receptacle wall of a manipulable support structure as recited in the claim.

Claim 7 recites the feature of a controller facilitating entry of a desired temperature for each heating chamber and control of the heater of each heating chamber. As discussed above for claim 8, the Koopman patent discloses individual controls for each module (e.g., See Column 3, line 39), as opposed to a common controller facilitating entry of desired temperatures and controlling heating chambers as recited in the claim. Since the Koopman patent does not disclose, teach or suggest the features recited in claims 4, 6 and 7 as discussed above, these claims are considered to be in condition for allowance.

The Examiner has rejected claim 34 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,910,386 (Johnson) in view of U.S. Patent No. 5,276,310 (Schmidt et al). This rejection is respectfully traversed. Briefly, the Johnson patent discloses an apparatus for storing and heating medical or dental examination instruments. The apparatus includes a treatment cabinet having a number of drawers including an instrument drawer located immediately beneath a ledge mounted

in the cabinet interior. A heat conductive plate having heating elements affixed thereto is mounted in a ledge recess. The heating elements heat the heat conductive plate, which in turn, elevates the temperature of the instrument drawer interior, thereby heating instruments stored within the drawer. The heating elements are energized by a power switch and preferably heat the instruments to about 115°F.

The Schmidt et al patent discloses an electrically heated toolbox for heating hand tools. The toolbox is a multiple drawer container that includes heating sheets integrally connected to an outside electrical power source. The heating sheets warm the hand tools by radiated heat or direct heat when the sheets are connected to the outside power source. A desired temperature may be obtained by using a rheostat temperature setting device.

In contrast, the present invention is directed toward a temperature controlled system as described above.

The Examiner takes the position that the Johnson patent discloses a heated drawer for receiving medical items and heat inherently conducted from any wall, the bottom in particular, to secondary walls. The Examiner indicates that the Johnson patent does not disclose applying heat directly to one wall, but further alleges that the Schmidt et al patent discloses applying heat directly to one drawer wall to heat tools contained therein. The Examiner takes the further position that it would have been obvious to one of ordinary skill in the art to adapt the heater means of the Schmidt et al patent to the warming device of the Johnson patent to enhance heating efficiency. However, independent claim 34 recites the features of applying heat to a first wall of each receptacle and controlling heat applied to the first wall of each receptacle in accordance with a measured temperature of that receptacle. The Johnson patent does not disclose, teach or suggest these features. Rather, the Johnson patent discloses a treatment cabinet with an instrument drawer disposed below

a heat conductive plate having heating elements affixed thereto. The heating elements heat the conductive plate that, in turn, heats the interior of the instrument drawer (e.g., See Column 2, line 29 and Column 4, line 15), as opposed to applying heat to a receptacle first wall as recited in the claim. Further, the cabinet of the Johnson patent is controlled by a power switch that energizes the heating elements to heat the plate to a predetermined temperature (e.g., See Column 4, line 25) in contrast to the claimed feature of controlling the applied heat in accordance with a measured temperature. Thus, the Johnson patent does not disclose, teach or suggest the above-discussed features recited in claim 34.

The Schmidt et al patent similarly does not disclose, teach or suggest the feature of controlling the applied heat in accordance with a measured temperature as recited in claim 34. In fact, the Schmidt et al patent discloses a rheostat resistor having on-off settings or multiple temperature settings and interconnected between the connecting means and heating means to control heating (e.g., See Column 2, line 21 and Column 4, line 27). In effect, the rheostat resistor of the Schmidt et al patent simply limits current supplied to the heating sheets based on the particular temperature setting (e.g., the temperature setting provides a specific resistance for the rheostat resistor to limit current to the heating sheets), as opposed to controlling heat in accordance with a temperature measurement as recited in the claim. Since the Johnson and Schmidt et al patents do not disclose, teach or suggest, either alone or in combination, the above-discussed features recited in claim 34, this claim is considered to be in condition for allowance.

In addition to the foregoing, it would not be obvious to combine the Johnson and Schmidt et al patents to obtain the claimed invention. Briefly, the Johnson patent discloses an apparatus for storing and heating medical or dental examination instruments as described above, while the Schmidt et al patent discloses an electrically heated toolbox for heating hand tools as described above. In

contrast, the present invention is directed toward a temperature controlled system as described above. Since the Johnson patent is concerned with heating medical items to a predetermined temperature via a plate dispersing applied heat above a cabinet drawer, the question arises as to why anyone would even think of incorporating a heating element directly attached to and below a toolbox drawer to heat tools contained therein in a medical apparatus when one is attempting to indirectly heat medical items. The answer is that there is no reason for doing so other than prohibited hindsight derived from Applicants' own disclosure. Thus, the proposed combination of the Johnson and Schmidt et al patents does not tender the claimed invention obvious.

*Noted
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In addition, Applicants have become aware of U.S. Patent Nos. 5,399,007 (Marconet) and 6,124,572 (Spilger et al). These patents were cited during prosecution of co-pending Patent Application Serial No. 09/413,532 having related subject matter. Applicants have reviewed the patents and find them to be cumulative in nature with respect to the previously submitted and cited documents and/or not material to patentability of the subject application. However, copies of the patents are provided for the Examiner's convenience and review.

The application, having been shown to overcome issues raised in the Office Action, is considered to be in condition for allowance and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

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